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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,171	10/12/2001	Ji-Rong Wen	MS1-936US	2858

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EXAMINER

WOO, ISAAC M

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 07/14/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/977,171

Applicant(s)

WEN ET AL.

Examiner

Isaac M Woo

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 9, 11-14, 16, 17, 19, 21-24, 26, 27 and 29 is/are rejected.
- 7) ☒ Claim(s) 5, 8, 10, 15, 18, 20, 25, 28 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. This action is in response to Applicant's Responses, filed on April 29, 2004 have been considered but they are not persuasive.
2. Claims 1-30 are pending.

Response to arguments

3. In response to Applicant's Remarks filed on April 29, 2004, the following factual arguments are noted:

Voorhees et al (U.S. Patent No. 5,864,845, hereinafter, "Voorhees") does not disclose or suggest, "identifying a same document and/or a plurality of similar documents selected by a user in response to a plurality of queries; and responsive to identifying the same document and/or the similar documents, generating a query cluster to indicate that the queries are similar independent of whether individual ones of the queries comprise similar composition with respect to other one of the queries".

However, examiner disagrees. Voorhees discloses, from the third rectangle, fig. 2, "deriving a similarity measure from a number of document retrieved in common between two queries, col. 4, lines 38-60. This teaches that queries are identified from plurality of queries that results in same and/or similar documents. Voorhees discloses, "determining the centroid of a query cluster by averaging vectors of queries contained within the cluster", see (the fifth rectangle, fig. 2). This teaches that query clusters are

generated based on same or similar query results. Voorhees discloses, "Search engines such as Excite and Alta Vista provide a query interface to the information in these pages", see (col.1, lines 47-59). This teaches the search engine provides query interface and each query input has no relationship each other and independent. This system of Voorhees teaches that each query input may be random query input, and the random query inputs are clustered by similar or same query results. Thus, Voorhees teaches identifying a same document and/or a plurality of similar documents selected by a user in response to a plurality of queries; and responsive to identifying the same document and/or the similar documents, generating a query cluster to indicate that the queries are similar independent of whether individual ones of the queries comprise similar composition with respect to other one of the queries.

Applicant also argues that Voorhees does not disclose or suggest, constructing a thesaurus comprising a plurality of synsets, wherein each synset comprises one or more query clusters, determining the similar documents based on a hierarchical positioning between individual ones of a plurality of documents commonly selected across the queries. However, Voorhees discloses, "The average distribution over a set of queries gives the mean number of relevant documents retrieved at or below rank r over the query set", see (col. 3, lines 50). Voorhees discloses, "(b) Form clusters from hierarchy by considering all queries that cluster above a certain threshold to belong to the same cluster", see (col. 5, lines 37-40), applying Ward's clustering algorithm, using the number of pages retrieved in common at a rank less than or equal to a parameter L as the similarity between two queries, forming clusters from hierarchy by considering all

queries that cluster above a certain threshold as belonging to the same or a common cluster, see (col. 6, lines 64-67 to col. 7, lines 1-3). This teaches that each query cluster has similar queries that result in similar document results. The similar query cluster is a set of synset that is defined from applicant specification on page 12, lines 7-11, and query cluster are forming from hierarchical structure. Thus, Voorhees discloses constructing a thesaurus comprising a plurality of synsets, wherein each synset comprises one or more query clusters, determining the similar documents based on a hierarchical positioning between individual ones of a plurality of documents commonly selected across the queries.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 6-7, 9, 11-14, 16-17, 19, 21-24, 26-27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voorhees et al (U.S. Patent No. 5,864,845, hereinafter, "Voorhees").

With respect to claims 1, 11 and 21, Voorhees discloses, the method, computer-readable media and computer device for clustering queries (col. 2, lines 40-49), identifying a same document and/or a plurality of similar documents selected by a user in response to a plurality of queries (two queries, col. 4, lines 38-50), see (the third rectangle, fig. 2, “deriving a similarity measure from a number of document retrieved in common between two queries, col. 4, lines 38-60, for instance, queries retrieve many document in common they are about the same topic, similar documents); and responsive to identifying the same document and/or the similar documents, generating a query cluster to indicate that the queries are similar (“determining the centroid of a query cluster by averaging vectors of queries contained within the cluster”, see (the fifth rectangle, fig. 2, col. 4, lines 38-60, col. 2, lines 23-49, col. 5, lines 13-67 to col. 6, lines 1-19). Voorhees discloses, queries comprises similar composition with respect to other ones of the queries, see (col. 4, lines 38-60, col. 2, lines 23-49, col. 5, lines 13-67 to col. 6, lines 1-19, clustering queries are grouping similar queries that are similar composition in terms of similar results). Voorhees does not explicitly disclose, queries are similar independent of whether individual ones of the queries comprise similar composition. This means that each query is independent of each query input. And Voorhees discloses, “Search engines such as Excite and Alta Vista provide a query interface to the information in these pages”, see (col.1, lines 47-59). This teaches the search engine provides query interface and each query input has no relationship each other and independent. Therefore, it would have been obvious to a person having ordinary skill in the art the time of the invention was made to include queries are similar independent of

whether individual ones of the queries comprise similar composition in the system of Voorhees. Generating query cluster from random (each query input is independent of each other) queries, improves search performance by grouping of similar queries.

With respect to claims 2, 12, and 22, Voorhees discloses, queries comprise a well formed natural language question, a keyword, or a phrase, see (col. 3, lines 1-8, col. 1, lines 13-29).

With respect to claims 3, 13, and 23, Voorhees discloses, query cluster is used to disambiguate a word or phrase in a query of the queries, see (col. 3, lines 1-8, col. 1, lines 13-29).

With respect to claims 4, 14, and 24, Voorhees discloses, the queries are similar based on similar keyword or phrase composition, see (col. 3, lines 1-8, col. 1, lines 13-29).

With respect to claims 6, 16, and 26, Voorhees discloses, constructing a thesaurus comprising a plurality of synsets, wherein each synset comprises one or more query clusters, see (col. 4, lines 38-60, col. 2, lines 23-49, col. 5, lines 13-67 to col. 6, lines 1-19, the similar query cluster is a set of synset that is defined from applicant specification on page 12, lines 7-11).

With respect to claims 7, 17, and 27, Voorhees discloses, identifying the same document and/or the similar documents further comprises determining the similar documents based on a proportionality of commonly selected individual documents, see (col. 4, lines 38-60, col. 2, lines 23-49).

With respect to claims 9, 19, and 29, Voorhees discloses, determining the similar documents based on a hierarchical positioning between individual ones of a plurality of documents commonly selected across the queries, see (col. 6, lines 64-67 to col. 7, lines 1-3).

Allowable Subject Matter

6. Claims 5, 8, 10, 15, 18, 20, 25, 28 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M Woo whose telephone number is (703) 305-0081. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IMW
July 9, 2004


SHAHID ALAM
PRIMARY EXAMINER